WHAT IS CLAIMED IS:

1. A method of connecting threaded tubular members for use in a wellbore, comprising:

rotating two threaded members relative to one another;

detecting an event during relative rotation between the two threaded members; and

stopping relative rotation between the threaded members when reaching a predefined value from the detected event.

2. The method of claim 1, wherein the two threaded members define a shoulder seal, the event is a shoulder condition, and the predefined value is a rotation value.

3. The method of claim 2, further comprising measuring torque and rotation at regular intervals.

4. The method of claim 3, wherein detecting a shoulder condition comprises monitoring a rate of change of torque with respect to rotation.

5. The method of claim 2, wherein the shoulder condition occurs when surfaces of the threaded members forming the shoulder seal engage.

6. The method of claim 1, wherein the predefined value is selected according to geometry of the threaded members.

7. The method of claim 3, further comprising measuring relative relaxation rotation between the two threaded members.

8. The method of claim 7, further comprising determining acceptability of relaxation rotation between the two threaded members.

9. The method of claim 1, further comprising measuring torque and rotation at regular intervals, wherein detecting an event comprises detecting a first event and a subsequent second event and the detected event is the detected second event.

10. The method of claim 1, wherein the predefined value is a rotation value.

11. The method of claim 1, wherein the predefined value is a torque value.

12. The method of claim 9, wherein the first event is a seal condition occurring upon contact between the sealing surfaces and the second event is a shoulder condition.

13. A method of connecting threaded tubular members for use in a wellbore, comprising:

rotating two threaded members relative to one another;

measuring torque and rotation at regular intervals;

detecting an event during relative rotation between the two threaded members;

determining acceptability of a value measured at the event; and

stopping relative rotation between the threaded members after determining acceptability of the measured value if the measured value is unacceptable.

14. The method of claim 13, wherein the measured value is a torque value.

15. The method of claim 13, wherein the measured value is a rotation value.

16. The method of claim 14, further comprising calculating a target torque value based on the detected event irrespective of a maximum torque limit.

17. The method of claim 15, further comprising calculating a target torque value based on the detected event irrespective of a maximum torque limit.

18. The method of claim 13, wherein detecting an event comprises detecting a first event and a subsequent second event, determining acceptability of the measured value comprises determining acceptability of a change in value between a value measured at the first event and a value measured at the second event and stopping relative rotation comprises stopping relative rotation between the threaded members after determining acceptability of the change in measured values if the change in measured values is unacceptable.

19. The method of claim 18, wherein the measured values are torque values.

20. The method of claim 18, wherein the measured values are rotation values.

21. The method of claim 18, wherein the measured values are torque and rotation values and stopping relative rotation comprises stopping relative rotation between the threaded members after determining acceptability of the change in rotation and torque values if either the change in rotation or torque is unacceptable.

22. A method of connecting threaded members, comprising:

rotating two threaded members defining a shoulder seal relative to one another;

detecting a shoulder condition during relative rotation between the two threaded members;

calculating a target torque value based on the detected shoulder condition irrespective of a maximum torque limit; and

stopping relative rotation between the two threaded members upon reaching the target torque value.

23. The method of claim 22, wherein calculating the target torque value comprises adding a torque value measured at the detected shoulder condition to a predetermined torque value.

24. A system for connecting threaded tubular members for use in a wellbore, comprising:

a power drive unit operable to cause rotation between a first threaded member relative to a second threaded member;

a power drive control system operatably connected to the power drive unit, and comprising:

a torque detector;

a turns detector; and

a computer receiving torque measurements taken by the torque detector and rotation measurements taken by the turns detector; wherein the computer is configured to perform an operation, comprising:

rotating two threaded members relative to one another;

detecting an event during relative rotation between the two threaded members; and

stopping relative rotation between the threaded members when reaching a predefined value from the detected event.

25. The system of claim 24, wherein the power drive unit is a power tongs unit and the power drive control system is a power tongs control system.

26. The system of claim 24, wherein the power drive unit is a top drive unit and the power drive control system is a top drive control system.

27. The system of claim 24, wherein the two threaded members define a shoulder seal, the event is a shoulder condition, and the predefined value is a rotation value.

28. The system of claim 27, wherein the computer comprises a target value calculator for calculating a target rotation value by adding the predefined rotation

value to a measured rotation value corresponding to the detected shoulder condition.

29. The system of claim 24, wherein the predefined value is selected according to geometry of the threaded members.

30. The system of claim 24, further comprising a database and the operation further comprises collecting data on a threaded connection between the two threaded members and storing the data in the database.

31. The system of claim 30, wherein the operation further comprises calculating a new predetermined value by statistically analyzing the data in the database.

32. The system of claim 24, wherein the operation further comprises calculating the predefined value according to statistical analysis of data collected from previous connections.

33. The system of claim 24, wherein the operation further comprises measuring relative relaxation rotation between the two threaded members.

34. The system of claim 33, wherein the computer comprises a connection evaluator configured to determine acceptability of relative relaxation rotation between the two threaded members.

35. The system of claim 24, wherein the operation further comprises issuing a dump signal to stop relative rotation between the threaded members before reaching the predefined value from the detected event so that the relative rotation between the threaded members is stopped when reaching the predefined value from the detected event.

36. The system of claim 26, wherein the top drive comprises a gripping member coupled to an inside the first threaded member.

37. The system of claim 26, wherein the top drive comprises a torque head coupled to an outside of the first threaded member.

38. The system of claim 26, wherein the operation further comprises lowering the two threaded members together after reaching the predefined value.

39. The system of claim 38, wherein the two threaded members are casing and lowering the threaded members comprises rotating and lowering the threaded members while simultaneously injecting drilling fluid into the threaded members to drill a wellbore.

40. A system for connecting threaded tubular members for use in a wellbore, comprising:

a power drive unit operable to cause rotation between a first threaded member relative to a second threaded member;

a power drive control system operatably connected to the power drive unit, and comprising:

a torque detector;

a turns detector; and

a computer receiving torque measurements taken by the torque detector and rotation measurements taken by the turns detector; wherein the computer comprises a connection evaluator configured to evaluate a current state of makeup of the threaded members according to at least one of a measured torque value and a measured rotation value both corresponding to a detected shoulder condition and is configured to perform an operation, comprising:

rotating two threaded members defining a shoulder seal relative to one another; and

detecting a shoulder condition during relative rotation between the two threaded members.

41. The system of claim 40, wherein the at least one measured value is torque.

42. The system of claim 40, wherein the at least one measured value is rotation.

43. The system of claim 40, wherein the at least one measured value is rotation and torque.

44. The system of claim 40, wherein the computer further comprises an event detector configured to detect a first event and a second event, wherein the second event is the shoulder condition.

45. The system of claim 44, wherein the first event is a seal condition occurring upon sealing contact of sealing surfaces defined by the threaded members.